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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/599,920	06/28/2007	Patrick James McNaughton	18333.1.23.1.1	6593
22859 7590 04/06/2010 INTELLECTUAL PROPERTY GROUP FREDRIKSON & BYRON, P.A. 200 SOUTH SIXTH STREET, SUITE 4000 MINNEAPOLIS, MN 55402				
EXAMINER HOGAN, JAMES SEAN				
ART UNIT		PAPER NUMBER		
3752				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/599,920

Applicant(s)

MCNAUGHTON, PATRICK JAMES

Examiner

JAMES S. HOGAN

Art Unit

3752

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 December 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 17-28 and 35-48 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 17-28 and 35-48 is/are rejected.
- 7) ☒ Claim(s) 39 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB-08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to all remaining claims have been considered but are moot in view of the new ground(s) of rejection. As new art is again being introduced against the newly amended claims, prosecution shall remain under Non-Final status. The Examiner apologizes for any confusion in tandem for allowability on claims that may have been indicated in previous actions.

Claim Objections

2. Claim 39 is objected to because of the following informalities: It depends from claim 34, which is cancelled. Appropriate correction is required.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 17-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,364,010 to Richman et al in view of U.S. Patent No. 5,950,715 to Jönsson et al.

3. As per claims 17, Richman et al teaches generic washing system having nozzle means (108) for washing a window and a chamber for containing a washer fluid (106) and a generic heat exchanger (200) with a wiper fluid inlet (A) to allow wiper fluid to enter the heat exchanger and a wiper fluid outlet (b) to allow the wiper fluid to exit the

heat exchanger, the heat exchanger having a coolant passage traversing through the heat exchanger having a coolant inlet (C) and a coolant outlet (D), the coolant inlet and coolant outlet operably coupled to an engine's coolant system (100, 104) to allow passage of engine coolant through the heat exchanger. A pump for pumping the washer fluid is not shown in any depictions of the system of Richman, but is disclosed (Col. 1, lines 33-40). Means of circulation for the coolant are also disclosed as part of a vehicle coolant system. The heat exchanger of Richman et al does not teach plate passages. Jönsson et al teaches a heat exchanger entirely capable of acting as the heat exchanger in the depicted system of Richman et al, the heat exchanger having an inlet (5) that can be connected to the wiper fluid chamber and an outlet (6) that can be connected to the nozzle means, the heat exchanger having a passage plate (2) appropriate for engine coolant and plates appropriate for wiper fluid (also (2)), wherein the wiper fluid plates and coolant passage plates are held together (as per claims 19 and 21), by a fastening means (plates are brazed, Col. 3, line 31-35) and wherein the coolant passage plate allows the passage of coolant from the heat exchanger inlet (7) to the heat exchanger outlet (8). As per claims 18 and 20, the plates of Jönsson feature passages (13) that can be designated as being wiper fluid passages to transfer heat from passages (14) designated to be engine coolant passages. As per claim 21, Jönsson teaches cover plates (4) and (3) to enclose the passages. As per claim 23, 25 and 26, the passages for both fluids travel a "spiral" from inlet to outlet. As per claim 24, imperfections are depicted (See Figure 4) that would cause turbulence. As per claim

28, the two differing passages of Jönsson designated by inlets ((5,) and (7)) and outlets ((6) and (8)) travel in opposite directions (See figure 1).

4. Summarily, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have substituted the heat exchanger of Jönsson in the system of Richman et al in order to exchange heat in a manner more efficient than a tubing wrap, and to introduce a component that can be readily installed for any exchanging purpose as per engineering intent.

5. Claims 35-43 and 45-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,364,010 to Richman et al in view of U.S. Patent No. 5,950,715 to Jönsson et al

6. As per claims 35 and 45, Richman et al teaches (See Figure 2) a wiper fluid heater system, having a generic heat exchanger having a wiper fluid inlet (A) to allow wiper fluid to enter the heat exchanger and a wiper fluid outlet (B) to allow the wiper fluid to exit the heat exchanger, the heat exchanger having a nearby bypass passage, a coolant passage traversing through the heat exchanger having a coolant inlet (C) and a coolant outlet (D), the coolant inlet and coolant outlet operably coupled to an engine's coolant system (100) to allow passage of engine coolant through the heat exchanger; and a thermal actuator (102) which actuates a "gate" routing the engine coolant flow to the bypass passage from the coolant passage when the wiper fluid becomes too hot and by passes the exchanger entirely, wherein the heat exchanger is not conversely taught to have differing chambers. Jönsson et al teaches an exchanger perfectly capable of being used in the generically depicted system of Richman et al that has a

first chamber (10) and a second chamber (10a) wherein a inlet (7) usable for coolant is operably coupled to the first chamber (10) and an outlet (8) usable for coolant is operably coupled to the second chamber (10a), and where (as per claim 36) the exchanger also has first chamber (12) and a second chamber (12a) wherein a inlet (5) usable for wiper fluid is operably coupled to the first chamber (10) and an outlet (6) usable for wiper fluid is operably coupled to the second chamber (12a). As per claims 37, 41, and 46 the first chamber (12) for wiper fluid contributed to heating a fluid, provided a fluid of a higher temperature is circulating through the other inlet (7) and outlet (8), and where the second chamber (12a) is coupled to the first chamber (12). As per claims 38 and 40, coolant can traverse through passages through the first (10) and second chambers (10a). As per claims 39 and 47, a mixing valve (202) by Richman et al can serve as a third chamber as well as a pressure valve, as fluid from the second chamber (12a) of Jönsson et al is capable of being coupled to the chamber by its outlet (6), and where (as per claim 43) fluid remains heated. As per claim 43, there is not mention as to the comparative sizes of any chambers in relation to one another; however it is widely regarded to be a choice of engineering logic to size a component larger or smaller than another component in an invention, and therefore obvious to one having ordinary skill in the art. As per claim 48, Richman et al teaches a return fluid outlet (that is, fluid exits the exchanger at (B) and is coupled to the valve (202). Summarily, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have substituted the multi-chambered heat exchanger of Jönsson in the system of Richman et al in order to exchange heat in a manner more

efficient than a tubing wrap, and to introduce a component that can be readily installed for any exchanging purpose as per engineering intent.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAMES S. HOGAN whose telephone number is (571)272-4902. The examiner can normally be reached on Mon-Fri, 6:00a-3:00p EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Len Tran can be reached on (571)272-1184. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J. S. H./
Examiner, Art Unit 3752
03/30/10

/Len Tran/
Supervisory Patent Examiner, Art Unit 3752